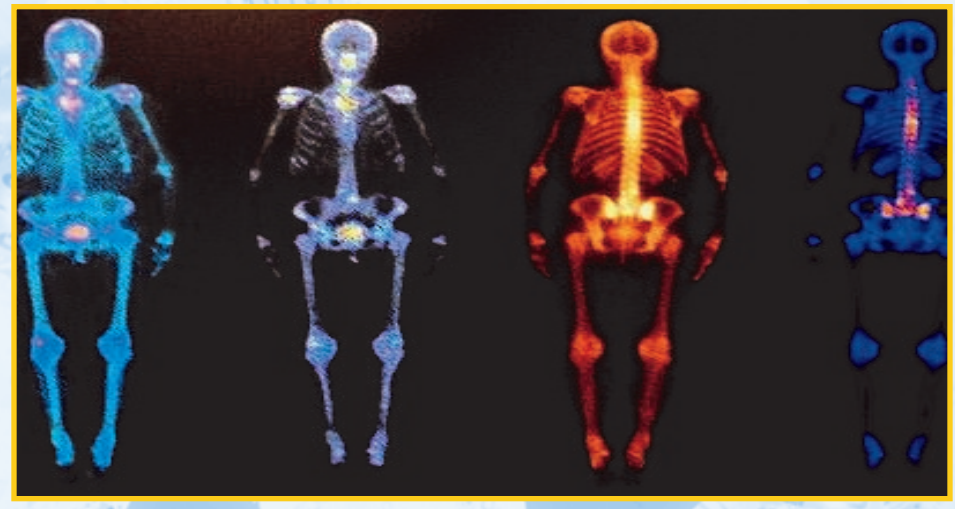
Small-Scale Target Fueled Reactor for Production of Medical Isotopes

Summary

The design of this reactor is straight forward and smaller in size as compared with previous designs. This technology uses the targets within the reactor as the fuel elements which are made from commercially available LEU. The production of medical isotopes is a critical need as the current major production facilities are aging and have already exceeded their estimated useful life. This increases the frequency, time of maintenance, associated costs, and potential environmental risk.

This innovative design would significantly alleviate the worldwide shortage of medical isotopes which are used for treating, testing, and diagnosing a variety of medical conditions. Since the U.S. currently uses half of the world's current supply, newly announced foreign policies about production may make the strain considerably worse.



BENEFITS

- Will help alleviate worldwide medical isotope shortage
- New design is more compact
- Less maintenance on new systems than outdated ones
- Greater safety and less environmental risk
- Increased efficiency
- Decreases U.S. dependency on foreign sources for medical isotopes

APPLICATIONS

- Healthcare
- Medical devices
- Pharmaceuticals

U.S. PATENTS PENDING ON SD#

- 11290

INTELLECTUAL PROPERTY & LICENSING CONTACT

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Licensing & Partnering Status:

Various license and partnering options are available. Please contact the Intellectual Property department to discuss.

Technology Readiness Level:

Sandia estimates this technology at a TRL 3. Studies have been performed to physically validate analytical predictions of key elements of the technology which should constitute "proof-of-concept."

National Nuclear Security Administration

Sandia is a multiprogram laboratory operated by Sandia Corporation, a LockheedMartin Company, for the United States Department of Energy's National Nuclear Security Administration under contact DE-AC04-94AL85000.
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